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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,946	08/22/2001	Masahiko Takeuchi	1752-0145P	7497

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EXAMINER

HAMILTON, CYNTHIA

ART UNIT PAPER NUMBER

1752

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/933,946

**Applicant(s)**TAKEUCHI ET AL. **Examiner**

Cynthia Hamilton

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The examiner notes that limitation of now cancelled claims 2 and 3 have been added to original claim 1. This genus of composition was not part of the original claims. The combined limitations of claims 2 and 3, i.e. the specific resins of original claim 2 with the silica sol filler of original claim 3, were not present in the original claims. This combination is newly addressed in this action.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

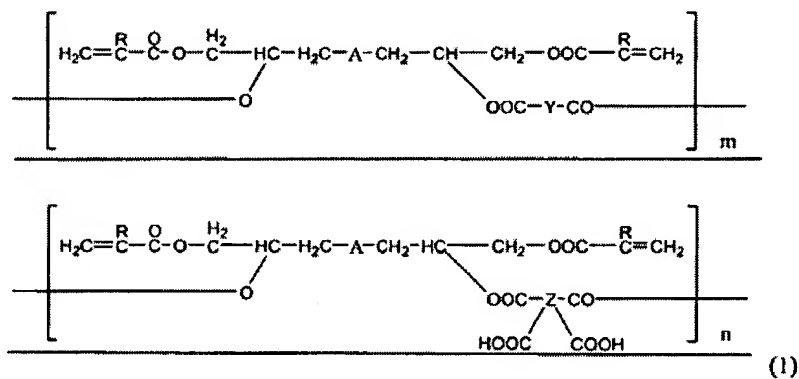
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants set forth two separate limits on the amount of inorganic filler present in the resin composition of claim 1. First, starting in line 3 is found:

".. and 0.1 to 1 parts by weight of an inorganic filler ..... per 100 parts by weight of the resin component wherein the resin-forming component comprises:

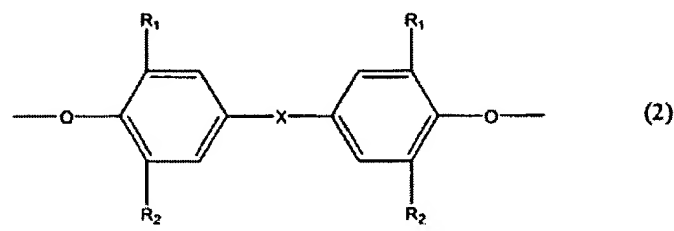
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(A) 100 parts by weight of a photopolymerizable unsaturated compound represented by the following general formula (1)

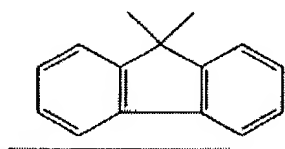


wherein R is a hydrogen atom or a methyl group, A is a group represented by the formula (2)

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(wherein  $R_1$  and  $R_2$  are independently hydrogen, an alkyl group with 1-5 carbon atoms, or a halogen),  $X$  is  $-CO-$ ,  $-SO_2-$ ,  $-C(CF_3)_2-$ ,  $-Si(CH_3)_2-$ ,  $-CH_2-$ ,  $-O-$ ,  $-S-$ ,



or a direct bond,  $Y$  and  $Z$  are respectively the residue of a polycarboxylic acid or its acid anhydride, and  $m$  and  $n$  are the number of repeating units at a molar ratio  $m/n$  0/100 - 100/0,

(B) 0-50 parts by weight of a compound containing an epoxy group,

(C) 0-10 parts by weight of a photopolymerization initiator or sensitizer;

Then in claim one in last seven lines is found another limit which is as follows:

“...wherein the inorganic filler is silica sol with its average particle diameter in the range of 5 nm-0.5  $\mu$ m per 100 parts by weight based on the combined weight of resin forming components which consists of at least one selected from a photo- or heat-polymerizable unsaturated compound and a condensable compound and the compound containing an epoxy group (B) and a curing agent of

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the compound (B)."

What is per 100 parts in the last seven lines? Since the filler "is" silica sol, then the filler is only silica sol. It is not comprised of silica sol but instead "is" silica sol. In this case, "is" is the same as "consists". Is the filler present in the amount set forth in the beginning of the claim wherein it is parts by weight per 100 parts of the defined "resin-forming component comprises" or is it present in parts per 100 parts by weight "based on the combined weight of resin forming components which consists" of an entirely different combination. This second combination starts with "consists" which excludes any other components other than those listed. This second combination has at most a photo- or heat polymerizable unsaturated compound and a condensable compound and "the compound containing an epoxy group (B) and a curing agent of the compound (B)". "at least" after consisting does not open up the defined group. "at least" here only allows for the required presence of at least one of the compounds listed. "at least" does not open the language beyond the limits of "consists" as recognized in standard usage unless applicants in their specification had so defined it to mean something else. Thus, which limit is placed on the parts of filler present? Is it the first or the second? There is no clear identification of (A) or (C) in the second combination. Where is the second combination in the claimed composition? The amount of filler present in the instant composition of claims 1 and 4-5 is completely confused by this ambiguous double limit. Thus, what the limits of the composition are intended to be cannot be determined because of this. Further, what is meant by "silica sol with its average particle diameter in the range of 5 nm-0.5  $\mu$ m per 100 parts" is confusing. Is this a diameter or a weight comparison or are wording missing?

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5. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The resin composition of claim 4 is dependent upon the resin composition "as described in claim 1" but then redefines (A) as "a photopolymerizable unsaturated compound". This (A) in claim 4 is much broader than that to which claim 1 is limited. If this language is intended to broaden the scope of (A) in claim 4 over that of (A) in claim 1 then claim 4 fails to further limit the subject of a previous claim, i.e. claim 1.

6. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. What is meant by "the resin-forming component" in claim 4 is confusing in view of (1) the separation of "the resin-forming component" and the photopolymerization initiator and (2) the defining of two separate groups of "resin forming components" in claim 1. In the first of claim 1 the photopolymerization initiator (C) is part of the "resin-forming component" and not separate. If this is so, how are the separate limits of parts by weight to be interpreted in claim 4? Is the resin forming component that set forth in the end of claim 1 instead, where a photoinitiator is not listed as the limited group with the exception it could be the 'curing agent of the compound (B)? Does the "silica" of claim 4 remain limited to the "silica sol" of claim 1? What is (A) of claim 4? Is it the limit in claim 4 or the limit in claim 1? Thus, claim 4 is very confusing and indefinite because of this.

7. Applicants' arguments with respect to the prior art are accepted with respect to the amended claims. The issues of clarity are new because of the amendments made by applicants.

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8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cynthia Hamilton whose telephone number is (703) 308-3626. As of December 12, 2003, this telephone number will be 571-272-1331. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.*

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff can be reached on 703-308-2464. As of December 12, 2003 this phone number will be 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.*

*Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.*

  
CYNTHIA HAMILTON  
PRIMARY EXAMINER

Primary Examiner Cynthia Hamilton

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January 24, 2004